Cruise Report
U.S.G.S. - State of Texas (Bureau of Economic Geology) Coop.

75033

1. Ship: R/V H. J. W. FAY

2. Cruise No.: 009

3. Area of Operation: South Texas inner continental (State territorial waters) from mid point off the Matagorda Peninsula north to the vicinity of Freeport and tie lines across the ancestral Brazos-Colorado River delta to the edge of the continental shelf.

4. Dates of operation: Cruise period from 1500 Z 12/14/75 to 1400 Z 12/18/75

5. Personnel:

James P. Olander	(Tracor)	Master
Henry Berryhill, Jr.	(U.S.G.S.)	Chief Scientist
Ronald Miller	(U.S.G.S.)	Watch Leader
Robert Vitaglione	(U.S.G.S.)	
Cary Pyle	(U.S.G.S.)	Watch Leader
Scotty Heald	(U.S.G.S.)	
Felicity Ohrm	(U.S.G.S.)	
Joe McGowan	(Texas Bur. Econ. Geol.)	
John Chin	(Univ. of Texas)	
David Botts	(Lorac)	Navigator
Sonny Andrus	(Lorac)	Navigator

6. Purpose:

Cruise 009 was devoted to acquisition of high quality high resolution seismic reflection data and was a continuation of cruise leg 008 following the same objectives: application of the land-use concept to the sea floor within Texas Territorial waters (10.3 miles); acquisition of a detailed and integrated base of geologic data as background for the investigation of a variety of shoreline and inner shelf needs including shoreline engineering, power plant sitings, pipeline corridors, port sitings and determination of sediment movement and sand budget; general environmental assessment; and as a base for selecting sites for a variety of sampling types including grab, piston, vibracore and biological.

7. Equipment: The geophysical data were obtained by a Del Norte Minisparker shooting 800 joules. The EDO Western 3.5-7.0 kHz system malfunctioned half way through cruise 009 and could not be used for the remainder of the time at sea.

FAY 009

8. Navigation: Precision navigation was provided by Lorac Services, Inc. with limits of accuracy within ±50 feet.

9. Data Acquired: 800 km of minisparker and approximately 300 km of 3.5 kHz profiles were obtained. Combined totals of profiles obtained for the 18 days duration of cruise legs 008/009 was 4140 km of minisparker data and 1485 km of 3.5 kHz data.

10. Comments:

a) Minisparker - The array was towed on the starboard side of the ship; the hydrophone streamer 150' astern of the sparker tip. The pulse generator was fired at a 1.0 rep. rate. The signal from the hydrophones was split and transmitted through two signal processors; one to a recorder with a 1.0 sec. sweep rate, the other at a 0.5 sec. sweep rate.

b) 3.5-7.0 kHz System - The 3.5 kHz range was used exclusively. The signal was recorded at a sweep rate of 0.5 sec. The time variable gain was used exclusively.

c) The records obtained were of good to excellent quality. The quality of the several tie lines across the shelf were of unusually high quality; the resolution is of such detail that several key reflections, representing Pleistocene low stands of the sea can be traced without equivocation from the shelf edge to the 20 ft. isobath, the inner terminus of the lines run.

11. Tabulated Information

a)	Number of days at sea	4
b)	Number of working days	4
c)	Total ship track in km	1000
d)	km of continuous data	800 minisparker 1.0 sec.
		800 minisparker 0.5 sec.
		300 3.5 kHz